

AMENDMENTS

IN THE CLAIMS

Please amend claims 1, 5-9 and 33, as set forth below.

Complete Listing of the Claims

Upon entry of the present amendment, the claims will stand as follows. The following listing of claims will replace all prior versions and listings of the claims in the present application:

1. (Currently amended) An isolated HLA pan DR-binding peptide comprising a stress protein fragment that binds to a MHC class II molecule, wherein the fragment is up to about 30 amino acid residues in length and (i) comprises a core sequence flanked at either end by at least ~~two one~~ amino acids, wherein the core sequence has an amino acid sequence selected from the group consisting of ~~LSTLVVNKI (SEQ ID NO:14), LSTLVLNRL (SEQ ID NO:15), LSEKKISSI (SEQ ID NO:18), LEDPYILLV (SEQ ID NO:19), FQDAYVLLS (SEQ ID NO:20), LTTEAVVAD (SEQ ID NO:21), FLTTEAVVA (SEQ ID NO:22), and LTAAEVVVT (SEQ ID NO:23)~~, and wherein the fragment comprises a naturally occurring amino acid sequence, or (ii) ~~comprises an amino acid sequence having at least about 70% sequence identity to a fragment of part (i).~~
2. (Previously presented) An isolated peptide according to claim 1, wherein the peptide binds to HLADR1, DR4, and DR7.
3. (Previously presented) An isolated peptide according to claim 1, wherein the naturally occurring amino acid sequence is selected from an amino acid sequence from human heat shock protein and a bacterial heat shock protein.
4. (Previously presented) An isolated peptide according to claim 3, wherein the bacterial heat shock protein is a mycobacterial heat shock protein.

5. (Currently amended) An isolated peptide according to claim 1, wherein the amino acid sequence of the peptide is at least 70% identical to an amino acid sequence selected from the group consisting of SEQ ID NOs: ~~2, 3,~~ 5, 6, 7, 8, and 9.

6. (Currently amended) An isolated peptide according to claim 5, wherein the amino acid sequence of the peptide is at least 80% identical to an amino acid sequence selected from the group consisting of SEQ ID NOs: ~~2, 3,~~ 5, 6, 7, 8, and 9.

7. (Currently amended) An isolated peptide according to claim 5, wherein the amino acid sequence of the peptide is at least 90% identical to an amino acid sequence selected from the group consisting of SEQ ID NOs: ~~2, 3,~~ 5, 6, 7, 8, and 9.

8. (Currently amended) An isolated peptide according to claim 1, wherein the amino acid sequence of the peptide is at least 95% identical to an amino acid sequence selected from the group consisting of SEQ ID NOs: ~~2, 3,~~ 5, 6, 7, 8, and 9.

9. (Currently amended) An isolated peptide according to claim 5, wherein the amino acid sequence of the peptide has an amino acid sequence selected from the group consisting of SEQ ID NOs: ~~2, 3,~~ 5, 6, 7, 8, and 9.

10. (Previously presented) An isolated peptide according to claim 1, wherein the stress protein is a heat shock protein.

11. (Previously presented) An isolated peptide according to claim 10, wherein the heat shock protein is a bacterial heat shock protein.

12. (Previously presented) An isolated peptide according to claim 10, wherein the heat shock protein is a mycobacterium species heat shock protein.

13. (Previously presented) An isolated peptide according to claim 12, wherein the mycobacterium species heat shock protein is hsp65.

14. (Previously presented) An isolated peptide according to claim 10, wherein the heat shock protein is a mammalian heat shock protein.
15. (Previously presented) An isolated peptide according to claim 14, wherein the mammalian heat shock protein is a human heat shock protein.
16. (Previously presented) An isolated peptide according to claim 15, wherein the human heat shock protein is human hsp60.
17. (Previously presented) An isolated peptide according to claim 1, wherein the fragment is 13 to about 30 amino acids in length.
18. (Previously presented) An isolated peptide according to claim 17, wherein the fragment is about 15 to about 25 amino acids in length.
19. (Previously presented) An isolated peptide according to claim 17, wherein the fragment is about 15 to about 20 amino acids in length.
20. (Previously presented) An isolated peptide according to claim 1, wherein the peptide has one or more D- amino acid residues.
21. (Previously presented) An isolated peptide according to claim 5 that contains a conservative amino acid substitution at at least one amino acid position in the peptide.
22. (Previously presented) An isolated peptide according to claim 1, wherein the peptide is covalently linked to an adjuvant.
23. (Previously presented) An isolated peptide according to claim 22, wherein the adjuvant is keyhole limpet hemocyanin, bovine serum albumin, human serum albumin, or isologous IgG.
24. (Previously presented) A pharmaceutical composition comprising a peptide according to claim 1 in a pharmaceutically acceptable carrier.

25 – 32 (Cancelled)

33. (Currently amended) A composition comprising a pharmaceutically acceptable carrier and an isolated peptide comprising a fragment of a stress protein that binds to a MHC class II molecule, wherein the fragment is up to about 30 amino acid residues in length and (i) comprises a core sequence flanked at either end by at least ~~two~~one amino acid~~s~~acid, wherein the core sequence has an amino acid sequence selected from the group consisting of LSTLVVNKL, LSTLVLNRL, LSEKKISSI (SEQ ID NO:18), LEDPYILLV (SEQ ID NO:19), FQDAYVLLS (SEQ ID NO:20), LTTEAVVAD (SEQ ID NO:21), FLTTEAVVA (SEQ ID NO:22), and LTAAEVVVVT (SEQ ID NO:23), and wherein the fragment comprises a naturally occurring amino acid sequence, or (ii) comprises an amino acid sequence having at least about 70% sequence identity to a fragment of part (i).

34. (Previously presented) A composition according to claim 33, wherein the fragment binds to at least one molecule selected from the group consisting of HLADR1, DR4, and DR7.

35 – 37 (Cancelled)

38. (Previously presented) A composition according to claim 34, wherein the isolated peptide has an amino acid sequence selected from the group consisting of SEQ ID NOS: 2, 3, 5, 6, 7, 8, and 9.

39. (Previously presented) A composition according to claim 34, further comprising a biological response modifier.

40. (Previously presented) A composition according to claim 39, wherein the biological response modifier is selected from the group consisting of a cytokine, a chemokine, a hormone, a steroid, and an interleukin.

41. (Previously presented) A composition according to claim 40, wherein the biological response modifier is an interferon.
42. (Previously presented) A composition according to claim 39, wherein the biological response modifier is selected from the group consisting of IL-1(α or β), IL-2, IL-3, IL-4, IL-5, IL-6, IL-7, IL-8, IL-9, IL-10, IL-11, IL-12, GM-CSF, M-CSF, G-CSF, LIF, LT, TGF- β , γ -IFN, TNF- α , BCGF, CD2, and ICAM.
- 43 – 59 (Cancelled)
60. (Previously presented) An isolated peptide according to claim 1 wherein the naturally occurring amino acid sequence is from a mammalian heat shock protein.
61. (Previously presented) An isolated peptide according to claim 1 that is chemically synthesized.
62. (Previously presented) An isolated peptide according to claim 1 that is synthesized by recombinant expression.
63. (Previously presented) An isolated peptide according to claim 1 wherein at least one amino acid residue of the fragment is a D-alpha amino acid residue.
64. (Previously presented) An isolated peptide according to claim 1 that is glycosylated.
65. (Previously presented) A composition according to claim 33 that is a liquid formulation.
66. (Previously presented) A composition according to claim 33 that is a solid formulation.